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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,491	05/16/2006	Philippe Ouziel	TD/4-22984/A/PCT	3427

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EXAMINER	
AHVAZI, BIJAN	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
10/30/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/579,491	OUZIEL ET AL.	
	Examiner	Art Unit	
	BIJAN AHVAZI	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *July 20, 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the amendment filed on July 20, 2009.

2. Claims 1-12 are pending.

3. The rejection of claims 1-4, 6-10 and 12 under 35 U.S.C. 102(b) as being anticipated by Perrin *et al.* (Pat. No. US 4,180,664) is withdrawn in view of the Applicants' amendment.

4. The rejection of claim 5 under 35 U.S.C. 103(a) as being unpatentable over Perrin *et al.* (Pat. No. US 4,180,664) as applied to claims1-4, 6-10 and 12 above, and further in view of Gerendas *et al.* (Pat. No. US 3,963,714) is withdrawn in view of the Applicants' amendment.

5. The rejection of claim 11 under 35 U.S.C. 103(a) as being unpatentable over Perrin *et al.* (Pat. No. US 4,180,664) as applied to claims1-4, 6-10 and 12 above, and further in view of Offord *et al.* (Pub. No. US 2004/0055093 A1) is withdrawn in view of the Applicants' amendment.

6. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

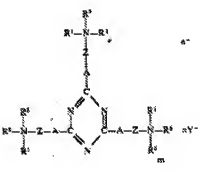
7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-5, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerendas *et al.* (Pat. No. US 3,963,714) in view of Bartl *et al.* (WO 03/012194 A1, the English

equivalent of this reference which is US Pub. No. 2004/0163189 A1 will be used as the English translation of said reference).

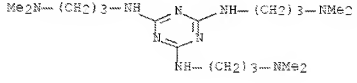
Regarding claims 1-3, 5 and 11, Gerendas *et al.* teach a compound of the formula used as retarders in dyeing anionic polyacrylonitrile fibers with basic dyes (Col. 1, lines 5-6)



wherein A is an oxygen atom or a group of the formula RN< in which R is hydrogen or alkyl of 1 to 4 carbon atoms, R^1, R^2 and R^3 are, each independently straight-chain or branched optionally hydroxysubstituted alkyl of 1 to 30 carbon atoms optionally interrupted by oxygen or nitrogen or benzyl or chlorobenzyl or R^1 and R^2 together form alkylene of 4 to 6 carbon atoms, k and m are, each independently, zero or 1, Z is optionally hydroxy- or methyl-substituted alkylene of 2 to 6 carbon atoms optionally interrupted by oxygen, Y^- is a monovalent organic or inorganic anion or is the *x*-th part of a x-valent organic or inorganic anion, *n* equals the sum of 1 + *k* + *m*, provided that the total number of carbon atoms in R^1, R^2 and R^3 is from 9 to 60 and the total number of carbon atoms in R^1, R^2 and R^3 of at least one ammonium group is not less than 5 (Col. 6, lines 22-54). Gerendas *et al.* do not expressly teach natural or synthetic polyamide fibre materials, wherein the polyamide fibre material is in the form of microfibres. .

However, Bartl *et al.* teach a method for dyeing and/or printing textile material containing non-split and/or at least partially split micro-fibres and/or micro-filaments, composed of at least one polyamide component and optionally at least one additional polymer component (Page 1, ¶ 0001). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply a compound as set forth by Gerendas *et al.* to natural or synthetic polyamide fiber in the form of microfibres as taught by Bartl *et al.* with reasonable expectation that this would result in providing a reliable and economical method for controlling dyeing process and effectiveness of quaternary ammonium salts, derived from the derivatives of triazine where shades are concerned.

Regarding claim 4, Gerendas *et al.* teach special quaternary ammonium salts, derived from 2,4,6-tris-(aminoalkylamino) derivatives of triazine, used as retarders in dyeing anionic polyacrylonitrile fibers with basic dyes (Col. 1, lines 3-6).



9. Claims 6-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerendas *et al.* (Pat. No. US 3,963,714) and Bartl *et al.* (WO 03/012194 A1) as applied to claims 1-5, and 11 above, and further in view of Perrin *et al.* (Pat. No. US 4,180,664).

Regarding claims 6-10 and 12, Gerendas *et al.* and Bartl *et al.* teach the features as discussed above. Gerendas *et al.* and Bartl *et al.* do not expressly teach a method (i) wherein the compound of formula as set forth is present in the liquor in an amount of from 0.01 to 15 % by weight, based on the weight of the polyamide fibre material, (ii) wherein the fibre material is treated before the dyeing (iii) wherein the treatment with the liquor comprising the compound of formula se set forth is carried out at a temperature of from 20 to 130°C, (iv) wherein the pretreatrnent is carried out at a pH of from 7 to 13, (v) wherein the treatment with the liquor comprising the compound of formula as set forth is carried out in accordance with the exhaust process.

However, Perrin *et al.* teach a process for improving the color yield and fastness properties of dyeing produced with anionic dyes on cellulose fiber material, to the liquors used for carrying out this process, which contain cationic fiber-reactive compounds as fixing agent before, during or after dyeing, with a cationic fiber-reactive, to the fibrous material treated in accordance with this process, and also to the novel cationic fiber-reactive compounds themselves and to a process for their manufacture (Col. 1, lines 7-16). The treatment liquors contain the compound of the formula (1) preferably in an amount between 0.1 and 20% by weight, in particular between 0.5 and 10% by weight, referred to the weight of the cellulose material, or, in padding liquors, of 1 to 100 g/l, preferably 10 to 50 g/l, of padding liquor, whilst the squeezing effect in the padding process is advantageously 60 to 90% by weight (Col. 5, lines 47-54) corresponding to the instant applicants' limitation claim 6.

Perrin *et al.* teach the treatment of the cellulose material with the cationic compound of the formula as set forth is effected preferably by a padding process, in which the material is first impregnated with the fixing agent, for example by slop-padding or printing, and then

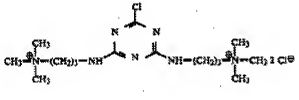
subjected to a fixing process. This application can be carried out before, during or after the dyeing. It is preferred to carry out the treatment before or during the dyeing (Col. 5, lines 16-23) corresponding to the instant applicants' limitation claim 7. The treatment of the cellulose material can also be effected before or during the dyeing by the exhaustion process. In this case it is possible to carry out the process at temperatures in the range between 20° and 100° C (Col. 5, lines 39-42) corresponding to the instant applicants' limitation claim 8. The process is therefore carried out preferably in a strongly dilute aqueous medium under as mild temperature and pH conditions as possible, advantageously at temperatures between 0° and 50 °C and pH values between 6 and 8, preferably in the presence of agents which neutralize mineral acid, for example sodium carbonate or sodium hydroxide (Col. 5, lines 8-15) corresponding to the instant applicants' limitation claim 9.

The treatment of the cellulose material can also be effected before or during the dyeing by the exhaustion process. In this case it is possible to carry out the process at temperatures in the range between 20° and 100° C (Col 5, lines 39-42) corresponding to the instant applicants' limitation claim 10. In addition to the cationic reactive compound of the formula (1), these liquors also contain alkali, for example sodium carbonate, sodium bicarbonate, sodium hydroxide or alkali donors, for example sodium trichloroacetate, and also, if appropriate, further additives, such as urea, thickeners, for example alginates, or polyacrylates, or salts, for example sodium chloride, or wetting agents (Col. 5, lines 55-62) corresponding to the instant applicants' limitation claim 12. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply a compound as set forth by Gerendas *et al.* to natural or synthetic polyamide fiber in the form of microfibres by Bartl *et al.* so as to include the steps of dyeing at specific temperature and pH ranges as taught by Perrin *et al.* with reasonable expectation that this would result in providing a reliable and economical method for controlling

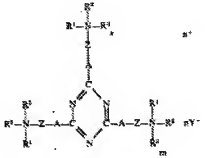
dyeing process and effectiveness of quaternary ammonium salts, derived from the derivatives of triazine where shades are concerned and furthermore the wet fastness properties are satisfactory at taught by Perrin *et al.* (Col. 1, lines 21-22).

10. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perrin *et al.* (Pat. No. US 4,180,664) in view of Gerendas *et al.* (Pat. No. US 3,963,714), and further in view of Bartl *et al.* (WO 03/012194 A1, the English equivalent of this reference which is US Pub. No. 2004/0163189 A1 will be used as the English translation of said reference).

Regarding claims 1-5, and 11, Perrin *et al.* teach a process for improving the color yield and fastness properties of dyeing produced with anionic dyes on cellulose fiber material, to the liquors used for carrying out this process, which contain cationic fiber-reactive compounds as fixing agent before, during or after dyeing, with a cationic fiber-reactive, to the fibrous material treated in accordance with this process, and also to the novel cationic fiber-reactive compounds themselves and to a process for their manufacture (Col. 1, lines 7-16) as shown below (Col. 8, lines 47-58, Example 4). Perrin *et al.* do not expressly teach where X and Y are, each independently of the other, NR_3R_4, wherein R_3 and R_4 are, each independently of the other, hydrogen or C_1-C_{12} alkyl.



However, Gerendas *et al.* teach a compound of the formula used as retarders in dyeing anionic polyacrylonitrile fibers with basic dyes (Col. 1, lines 5-6)



wherein A is an oxygen atom or a group of the formula RN< in which R is hydrogen or alkyl of 1 to 4 carbon atoms, R^1, R^2 and R^3 are, each independently straight-chain or branched optionally hydroxysubstituted alkyl of 1 to 30 carbon atoms optionally interrupted by oxygen or nitrogen or benzyl or chlorobenzyl or R^1 and R^2 together form alkylene of 4 to 6 carbon atoms, k and m are, each independently, zero or 1, Z is optionally hydroxy- or methyl-substituted alkylene of 2 to 6 carbon atoms optionally interrupted by oxygen, Y^- is a monovalent organic or inorganic anion or is the *x*-th part of a x-valent organic or inorganic anion, *n* equals the sum of 1 + *k* + *m*, provided that the total number of carbon atoms in R^1, R^2 and R^3 is from 9 to 60 and the total number of carbon atoms in R^1, R^2 and R^3 of at least one ammonium group is not less than 5 (Col. 6, lines 22-54). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify process for improving the color yield and fastness properties of dyeing produced with anionic dyes on cellulose fiber material by Perrin et *al.* so as to include quaternary ammonium salts, derived from 2,4,6-tris-(aminoalkylamino) derivatives of triazine as taught by of Gerendas *et al.* with reasonable expectation that this would result in providing a

reliable and economical method for controlling dyeing process and effectiveness of quaternary ammonium salts, derived from the derivatives of triazine where shades are concerned

Neither Perrin et *al.* nor Gerendas *et al.* teaches natural or synthetic polyamide fibre materials, wherein the polyamide fibre material is in the form of microfibres. However, Bartl *et al.* teach a method for dyeing and/or printing textile material containing non-split and/or at least partially split micro-fibres and/or micro-filaments, composed of at least one polyamide component and optionally at least one additional polymer component (Page 1, ¶ 0001). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify process for improving the color yield and fastness properties of dyeing produced with anionic dyes on cellulose fiber material by Perrin et *al.* with quaternary ammonium salts, derived from 2,4,6-tris-(aminoalkylamino) derivatives of triazine by of Gerendas *et al* so as to include applying the liquor composition to natural or synthetic polyamide fiber in the form of microfibres as taught by Bartl *et al.* with reasonable expectation that this would result in providing a reliable and economical method for controlling dyeing process and effectiveness of quaternary ammonium salts, derived from the derivatives of triazine where shades are concerned.

Regarding claim 6, Perrin et *al.* teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials, wherein the treatment liquors contain the compound of the formula (1) preferably in an amount between 0.1 and 20% by weight, in particular between 0.5 and 10% by weight, referred to the weight of the cellulose material, or, in padding liquors, of 1 to 100 g/l, preferably 10 to 50 g/l, of padding liquor, whilst the squeezing effect in the padding process is advantageously 60 to 90% by weight (Col. 5, lines 47-54) corresponding to the instant applicants' limitation claim 6.

Regarding claim 7, Perrin et *al*. teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials wherein the treatment of the cellulose material with the cationic compound of the formula as set forth is effected preferably by a padding process, in which the material is first impregnated with the fixing agent, for example by slop-padding or printing, and then subjected to a fixing process. This application can be carried out before, during or after the dyeing. It is preferred to carry out the treatment before or during the dyeing (Col. 5, lines 16-23) corresponding to the instant applicants' limitation claim 7.

Regarding claim 8, Perrin et *al*. teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials wherein the treatment of the cellulose material can also be effected before or during the dyeing by the exhaustion process. In this case it is possible to carry out the process at temperatures in the range between 20° and 100° C (Col. 5, lines 39-42) corresponding to the instant applicants' limitation claim 8.

Regarding claim 9, Perrin et *al*. teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials wherein the process is therefore carried out preferably in a strongly dilute aqueous medium under as mild temperature and pH conditions as possible, advantageously at temperatures between 0° and 50 °C and pH values between 6 and 8, preferably in the presence of agents which neutralize mineral acid, for example sodium carbonate or sodium hydroxide (Col. 5, lines 8-15) corresponding to the instant applicants' limitation claim 9.

Regarding claim 10, Perrin et *al*. teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials wherein the treatment of the cellulose

material can also be effected before or during the dyeing by the exhaustion process. In this case it is possible to carry out the process at temperatures in the range between 20° and 100° C (Col 5, lines 39-42) corresponding to the instant applicants' limitation claim 10.

Regarding claim 12, Perrin et *al.* teach a method of increasing the depth of shade of dyed natural or synthetic polyamide fibre materials wherein in addition to the cationic reactive compound of the formula (1), these liquors also contain alkali, for example sodium carbonate, sodium bicarbonate, sodium hydroxide or alkali donors, for example sodium trichloroacetate, and also, if appropriate, further additives, such as urea, thickeners, for example alginates, or polyacrylates, or salts, for example sodium chloride, or wetting agents (Col. 5, lines 55-62) corresponding to the instant applicants' limitation claim 12.

Response to Arguments

11. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Examiner Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijan Ahvazi, Ph.D. whose telephone number is (571)270-3449. The examiner can normally be reached on M-F 8:0-5:0. (Off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BA/
Bijan Ahvazi,
Examiner
Art Unit 1796

/Harold Y Pyon/
Supervisory Patent Examiner, Art Unit 1796

10/27/2009